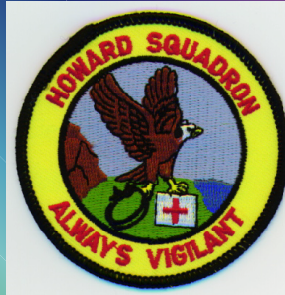




*Quarterly Gazette
of the
Howard Composite Squadron
Civil Air Patrol*
— No 11 —
R. E. Terry *PAO*



AEROSPACE EDUCATION EVENTS!

LECTURE BY DR. ROBERT ZUBRIN AT THE NATIONAL AIR AND SPACE MUSEUM



As guests of The National Capital Area Chapter of the Mars Society, Howard Composite Squadron was recently privileged to attend a lively and wide ranging presentation entitled "Mars Direct: Humans to the Red Planet within a Decade" by Dr. Robert Zubrin, an internationally renowned authority and advocate of Mars exploration. The evening affair was held at the National Air and Space Museum Planetarium.

Mars Society Speaker

In July 1989, on the 20th anniversary of the Apollo Moon landing, President Bush called for America to renew its pioneering push into space with the establishment of a permanent Lunar base and a series of human missions to Mars. While many have said that such an endeavor would be excessively costly and take many decades a small team at Martin Marietta drew up a daring plan that could sharply cut costs and send a group of American astronauts to the Red Planet within ten years. This plan, known simply as "Mars Direct," has attracted international attention, including coverage in such publications as Newsweek, Fortune, The Economist, Air and Space Smithsonian, the New York Times, the London Times, the Boston Globe and Izvestia. It has also been covered by the Discovery Channel, PBS, ABC, NBC, CBS, National Public Radio, and the BBC.

As its principal author, Dr. Zubrin was uniquely equipped to expound and defend the proposal, pointing

out the many features that optimized a crew's safety and emphasized the utilization of Martian resources to minimize the cost. He also pointed out the important relationship that such exploration shares with the pioneering spirit of America and the general benefits to education and technology.

Dr. Zubrin concluded with a detailed account of Mars Society research activities on Devon Island in the high arctic during the summer. He showed how the human crew of the Flashline Research Station had overcome the kind of disasters that would have totally confounded robotic exploration and continued by outlining some of the research targets to be examined by the station in future field seasons.

Our cadet and senior members sparked several further exchanges with questions, including the implications that any putative Martian life might pose a danger to Earthly creatures. Dr. Zubrin graciously autographed copies of his books and encouraged the interests of individual cadets in Mars exploration.



The Howard Squadron — pictured here with Dr. Zubrin — was the largest single group at the lecture, and this is not all of us, a few shy senior members are also lurking about!

Formerly a Staff Engineer at Lockheed Martin Astronautics in Denver, Dr. Zubrin, is now president of his own company – Pioneer Astronautics. He holds a Masters degree in Aeronautics and Astronautics and a Doctorate in Nuclear Engineering. He is the inventor of several unique concepts for space propulsion and exploration, the author of over 100 published technical and non-technical papers in the field, as well as two books: *The Case for Mars* and *Entering Space: Creating a Space-Faring Civilization*. Recently, he founded the Mars Society – an international organization dedicated to furthering the exploration of Mars by both public and private means.

The quarter afforded us two more launch opportunities with NARHAMS. The first was participation at the annual night launch from the Middletown site. This effort was preceded by some training in badge check items. We then launched about a dozen total flights and recovered almost all of the rockets for later use. One payload (Zenith II) lost its lower stage when launched at night and also dropped its "lightstick" straight away as the parachute deployed.

Rockets!

A second event at the end of September was the APL and AIAA sponsored "Aerospace Picnic", where we had a fine chance to meet potential recruits and exercise the fleet a bit further. In this case a second payload lost its upper stage to the tree canopy – it now has the surviving lower stage mated with the upper stage remaining from the night launch. A pair of rockets from cadet Wainland also provided some interesting outcomes.



Support of the American Institute of Aeronautics and Astronautics is potentially important to the squadron due to the "Evolution of Flight" grants which are to be awarded by local sections (such as that at APL) in connection with a national campaign aimed at the 100 th anniversary of the Wright brothers flight at Kitty-Hawk. In the spring we will have an opportunity to propose an activity to AIAA and may receive as much as \$5,000 for something of interest to them.



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Cadet Activities and Achievements

Flight training is one of the best deals in the Civil Air Patrol activity spectrum, and this summer three of our cadets began serious efforts on the path to aviation proficiency. Powered flight encampments were attended by C/2d Lt Dan Proffen and C/2d Lt Sara Haack, while C/TSgt Andrew Fenner enjoyed the Wing's glider camp.

Flight Encamp ments



The Howard Squadron's Cadets Dan Proffen and Sara Haack earned their wings for solo flights at separate flight encampments.

MD Wing Flight Academy

As a chance for others to share these experiences, we have invited their remarks on the summer's events. From **Dan Proffen** then, a summary of the Wing Flight Encampment held in Aberdeen, MD.

Since I was young, I have always had a fascination with airplanes. My dream of flying began the first time I stepped into an airliner. Since then, I have had the privilege of flying several more times, each increasing my passion for aviation. The peak of my flight experiences thus far occurred this past summer when five other cadets and I had the opportunity to attend the Maryland Wing Solo School. This program not only provided me with valuable knowledge and experience, but also played an integral role in unfolding my lifelong dream in aviation.

The school began with a preliminary weekend dedicated to textbook studies. The goal was to complete as much of the ground school as possible so as to allow the majority of the main solo school to be dedicated to flight experience. Over this weekend we worked long days watching flight-training videos, studying the textbook, and reviewing material that we would later encounter on the FAA Private Pilot Written Exam. Our training was performed in an interactive environment, in which we worked closely with our instructors to learn the invaluable material. By the end of the weekend, we had covered approximately two-thirds of the entire material, and were striving for some real flight time.

Later in the summer, we arrived at Aberdeen Proving Grounds in Aberdeen, MD for the greater part of our solo program. We were excited and looking forward to a week of flying. Most of the week consisted of a combination of classroom training and flight experience. Each morning, we would wake up before sunrise and start the day with a hearty breakfast. After this, we headed over to the airport where we would spend most of the day. Because the six of us cadets were evenly divided among the three instructors, one cadet was in the air with his instructor at any given time while the other would have an opportunity to study the material back at the airport lounge. This shift repeated 2-3 times a day, providing each cadet with two to three hours of very personalized flight time each day. In the early evening, we would pack up and head back to Aberdeen for dinner and ground school. After a full day of flying and several additional hours of



ground school, we were all exhausted by the day's end. My most memorable experience at this activity was my unsupervised solo. After having achieved two supervised solos, in which I flew the airplane around the pattern as the instructor watched on the ground, I was given the opportunity to

fly without supervision. Trusting me with complete discretion, the instructor allowed me to fly out of the pattern to wherever I desired in order to practice concepts and maneuvers that I had learned.

This activity was a success for every cadet. Each of us received close to fifteen hours of logged flight time and soloed at least once. Thus, the main goal of the program was accomplished in each of us. Additionally, a few of us passed the Private Pilot Written Exam, which was administered on the last day. Thus, having completed these achievements, each of us developed excellent foundations in aviation.

CAP National From **Sara Haack**, this report about the national flight academy which is generally a bit more regimented than our Wing's version.

Power Academy The flight academy lasted about 10 days and was located in Smyrna, TN, just east of Nashville. There were about 19 cadets ranging in grade from C/SrA to C/1st Lt. The flight academy was split up into three parts: ground school, flight school, and free time.

During ground school, we learned about the basics such as traffic patterns, radio calls, different parts of the plane, and what certain signs, markings, or signals meant. There were some tests over the material but we were not given the opportunity to take the FAA Written Exam.

The flight school was actually in the Cessna 172 with our instructor (mine was Ray Davis). We had to practice everything from radios, to taxiing, to stalls. After the instructor felt we were ready to solo and had almost 10 hours of flying time, it was time for the instructor to get out of the plane. The solo was simple; take off, follow the traffic pattern, touch and go, follow the traffic pattern, touch and go, follow the traffic pattern, and land. All this while making radio calls, hitting the right airspeed, altitude, and rpms. After the landing and you taxi back to the runway to trade future soloists, turn off the plane and get out, your instructor congratulates you and the highlight is when splashed with a bucket of water then given the back of a shirt where everybody signs and maybe puts a little note. After you first solo, you're done flying. In terms of free time, there was lots of it. You were to use the time studying or just relaxing. There was PT every morning and we slept in barracks and ate in the chow hall. Other activities included drug prevention and team building. After all was done, we had a final banquet and awards were given.



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MD Wing Glider Camp

Under the banner *Glider Academy 2000*, the youth glider camp was sponsored by the Maryland Wing and the Mid-Atlantic Soaring Association (M-ASA). The camp was committed to provide at least one glider flight per cadet. In the three previous glider academies, each cadet received two glider flights. Each flight was with an FAA certified glider flight instructor, and the time logged could be part of the training requirements toward solo flight.

From **Andrew Fenner**, "I enjoyed Glider Camp. I found that the flight instructor was very willing to let me take the controls, and even make a landing! The benefits from glider Camp included a chance to get my A.C.U.T. and B.C.U.T. radio license. And for those fortunate cadets who already had their license, there was a pool. We had a pool party at the end!"



Community Activities Support

The Squadron fielded an impressive showing at the annual farm show held on the grounds of Mt. Pleasant. Adding to the usual crafts, food, and farm machine demos this year were two "blue grass" bands.

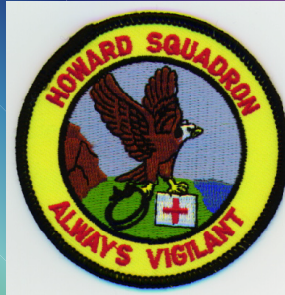
Farm Show

We parked about 520 cars for the Howard County Antique Farm Equipment Club over the two days of the show and were rewarded with a generous contribution of \$150 !

Thanks to the many senior members and cadets A. Chandra, C. Christensen, A. Fenner, J. Flagg, D. Haack, S. Haack, J. Middleton, R. Rockstroh, S. Sines, D. Steciak, J. Widmer, and D. Wainland for making this a success!



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**Promotions
&
Awards**

Cadets: First a welcome to new member, David Wainland.
Promotions and ribbons for the quarter are:

Dan Haack	Arnold, Wright
Carl Christiansen	Wright
Rebecca Puppa	Arnold
Avi Chandra	Wright
Johathan Widmer	Arnold
David Wainland	Curry
Scott Summe	Red Service
Daniel Steciak	C/1st Lt

Seniors: Please welcome our new member Jason Kerpelman.

**Web Site
([hcs.mdwg.
cap.gov](http://hcs.mdwg.cap.gov))**

The "Aerospace Education" page has been stocked with several new links to rocketry sites, as well as links to cover current events in aerospace. We have received inspired and proficient contributions from Cadets Chandra and Wainland, which are going to be integrated onto the site in due time.

Accounts of Emergency Service actions have also been added to the ES page. A pointer to the incredibly rich Crockett SAR web page has been added to the ES Training page.

**Quarterly
Order
of the
Wingnut**

This was a pretty thin quarter for those kinds of "Keystone Cops" events I like to cite here. The winner however is none other than C/2d Lt Proffen for showing up at my rocket shoot in civies!

